

— 09/876322 —

FILE 'REGISTRY' ENTERED AT 16:53:14 ON 22 SEP 2002

L1 8 S VANADYL SULFATE/CN OR POTASSIUM FERRICYANIDE/CN OR AMMONIUM M
L2 1 S AMMONIUM IRON CITRATE/CN
L3 9 S L1 OR L2
L4 10 S NICOTINE ADENINE DINUCLEOTIDE
L5 0 S NICOTINE ADENINE DINUCLEOTIDE/CN
L6 1 S NADIDE/CN

FILE 'CAPLUS, WPIDS, MEDLINE' ENTERED AT 17:00:42 ON 22 SEP 2002

FILE 'REGISTRY' ENTERED AT 17:00:58 ON 22 SEP 2002

SET SMARTSELECT ON
L7 SEL L6 1- CHEM : 20 TERMS
SET SMARTSELECT OFF

FILE 'CAPLUS, WPIDS, MEDLINE' ENTERED AT 17:00:59 ON 22 SEP 2002

FILE 'REGISTRY' ENTERED AT 17:02:52 ON 22 SEP 2002

SEL L6 CN

FILE 'CAPLUS, WPIDS, MEDLINE' ENTERED AT 17:03:49 ON 22 SEP 2002

FILE 'REGISTRY' ENTERED AT 17:05:16 ON 22 SEP 2002

FILE 'CAPLUS, WPIDS' ENTERED AT 17:07:21 ON 22 SEP 2002

FILE 'REGISTRY' ENTERED AT 17:07:34 ON 22 SEP 2002

SET SMARTSELECT ON
L8 SEL L6 1- CHEM : 20 TERMS
SET SMARTSELECT OFF

FILE 'CAPLUS, WPIDS' ENTERED AT 17:07:35 ON 22 SEP 2002

FILE 'CAPLUS' ENTERED AT 17:08:20 ON 22 SEP 2002

L9 1 S L6 (L) L3



no good

> d bib ab

L9 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2002 ACS
AN 1973:53577 CAPLUS
DN 78:53577
TI Concentration of the nicotinamide coenzymes in the liver of rats under the effect of molybdenum
AU Ivanov, N.; Profirov, Ya. I.
CS Livest. Breed. Inst., Kostinbrod, Bulg.
SO Dokl. Bolg. Akad. Nauk (1972), 25(8), 1121-4
CODEN: DBANAD
DT Journal
LA English
AB The oral or injection administration of 10 mg ammonium molybdate [13106-76-8]/kg caused a decrease after 17 hr in the total concns. of NAD [53-84-9] and NADP [53-59-8] in the liver of adult male rats and 56-day-old chickens, and the decrease did not depend on the channels of introduction of molybdenum [7439-98-7] into the body. The effect of Mo was stronger in pure-bred White Plymouth Rock chickens than in White Plymouth Rock-Cornish crossbred chickens. The effect of toxic doses of Mo was probably due to Mo inhibition of the biosynthesis of the nicotinamide coenzymes rather than to intensification of the breakdown of the coenzymes.

=> d que 110
L6 1 SEA FILE=REGISTRY NADIDE/CN
L10 4 SEA FILE=CAPLUS L6 (L) TRANSITION METAL#

=> d 1-4 bib ab kwic

L10 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2002 ACS
AN 1997:150542 CAPLUS
DN 126:289852
TI An analytical study of the redox behavior of 1,10-phenanthroline-5,6-dione, its transition-metal complexes, and its N-monomethylated derivative with regard to their efficiency as mediators of NAD(P)+ regeneration
AU Hilt, Gerhard; Jarbawi, Tafeeda; Heineman, William R.; Steckhan, Eberhard
CS Inst. Organische Chem. Biochem., Univ. Bonn, Bonn, D-53121, Germany
SO Chemistry--A European Journal (1997), 3(1), 79-88
CODEN: CEUJED; ISSN: 0947-6539

PB VCH

DT Journal

LA English

AB The synthesis as well as the chem. and electrochem. properties of homoleptic and heteroleptic (trispyridylmethylamine as coligand) transition-metal complexes (Ru and Co) of 1,10-phenanthroline-5,6-dione (PD) and of its N-monomethylated deriv. (PDMe+) are described. In particular, their ability to abstr. hydride ions was studied. Electrochem. investigations with cyclic voltammetry, rotating disk electrode expts., and spectroelectrochem. methods at different pH values gave an insight into the complex electrochem. of the compds. described, which is strongly influenced by a hydration preequil. The electrochem. active quinone form of the transition-metal complexes can be reduced to the hydroquinone state in acidic soln. and to their transition-metal-stabilized semiquinone states for neutral and basic solns., whereas PDMe+ is reduced to the hydroquinone state in both acidic and neutral solns. The compds. can also be reduced chem., and are efficient catalysts for the indirect oxidn. of the enzymic cofactor NAD(P)H. For the indirect aerobic NAD(P)H oxidn., up to 900 turnovers per h can be obsd., an achievement yet to be reached by other catalyst systems.

IT 53-84-9, NAD+

RL: BSU (Biological study, unclassified); FMU (Formation, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)

(prepn. of and redox behavior of 1,10-phenanthroline-5,6-dione, **transition-metal** complexes, and N-monomethylated deriv. as mediators of NAD(P)+ regeneration)

L10 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2002 ACS
AN 1994:243822 CAPLUS
DN 120:243822
TI Transition metal complexes of 1,10-phenanthroline-5,6-dione as efficient mediators for the regeneration of NAD+ in enzymic synthesis
AU Hilt, Gerhard; Steckhan, Eberhard
CS Inst. Biochem. Org. Chem., Univ. Bonn, Bonn, 53121, Germany
SO Journal of the Chemical Society, Chemical Communications (1993), (22), 1706-7
CODEN: JCCCAT; ISSN: 0022-4936

DT Journal

LA English

AB The complexation of 1,10-phenanthroline-5,6-dione by transition metals increases the catalytic turnover frequency by a factor of .ltoreq.17 for the aerobic-chem. and a factor of 14 for the indirect electrochem. NAD+-regeneration for horse-liver alc. dehydrogenase (HLADH)-catalyzed cyclohexanol oxidns. to cyclohexanone in comparison with the uncomplexed phenanthroline-diones.

IT 53-84-9, NAD⁺
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (aerobic and anaerobic electrochem. regeneration of, mediated by
transition metal complexes of phenanthroline-dione in
 horse-liver alc. dehydrogenase-catalyzed oxidn. of cyclohexanol to
 cyclohexanone)

L10 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2002 ACS
 AN 1990:493799 CAPLUS
 DN 113:93799
 TI Demetalization of alcohol dehydrogenase isolated from chick-pea and
 reactivation of the apoenzyme by cobalt, nickel, zinc, lead, and cadmium
 ions
 AU Leblova, Sylva; El Ahmad, Mustafa; Zatloukalova, Sona
 CS Fac. Sci., Charles Univ., Prague, 128 40, Czech.
 SO Biologia (Bratislava) (1989), 44(12), 1155-60
 CODEN: BLOAAO; ISSN: 0006-3088
 DT Journal
 LA English
 AB Conditions for the removal of bound Zn in chick-pea alc. dehydrogenase
 (ADH) purified to electrophoretic homogeneity were tested. ADH without Zn
 was obtainable by equil. dialysis against a Tris-acetate buffer (pH 6.5)
 contg. 0.1 mol.L⁻¹ EDTA and mercaptoethanol (20 h) and a subsequent 48-h
 dialysis against a Tris-acetate buffer (pH 7.0) employed to remove EDTA.
 Both dialysis procedures were carried out at 4.degree.. The sample of ADH
 obtained was completely inactive, while the ADH twice dialyzed without
 EDTA retained 60% of its activity. ADH without Zn could be reactivated
 best by using Zn and, to a lower extent, Co and Ni ions. Reactivation
 with Pb and Cd ions was negligible. The following conditions were optimal
 for reactivation of apo-ADH: pH 8.2-8.5, 1 h at 20.degree.. If ADH was
 preincubated with NAD in the absence of Zn and then reactivated by metals,
 the degree of reactivation was decreased at a concn. of NAD of 1 mmol.L⁻¹.
 At higher concn. no reactivation was obsd.

IT 53-84-9, NAD
 RL: BIOL (Biological study)
 (alc. dehydrogenase apoenzyme of chickpea reactivation by divalent
transition metal response to)

L10 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2002 ACS
 AN 1979:196952 CAPLUS
 DN 90:196952
 TI Interaction of dinucleotides with divalent metal ions: a circular
 dichroism study
 AU Zentz, Christian; Chottard, Genevieve; Bolard, Jacques
 CS Dep. Rech. Phys., Univ. Pierre Marie Curie, Paris, Fr.
 SO J. Inorg. Nucl. Chem. (1978), 40(12), 2019-23
 CODEN: JINCAO; ISSN: 0022-1902
 DT Journal
 LA English
 AB The interactions between NAD and NADP and M²⁺ (M = Mg, Mn, Co) were
 studied by UV CD and also visible CD for the Co complexes. The changes in
 CD with temp. showed that M²⁺ did not bridge the purine base and the
 nicotinamide. In the presence of Co²⁺ the N(1) atom of adenine was
 deprotonated in formation of a 1:2 Co²⁺-dinucleotide complex, the 2
 adenine bases being stacked.

IT 53-59-8D, transition metal complexes 53-84-9D,
transition metal complexes
 RL: RCT (Reactant)
 (CD of)

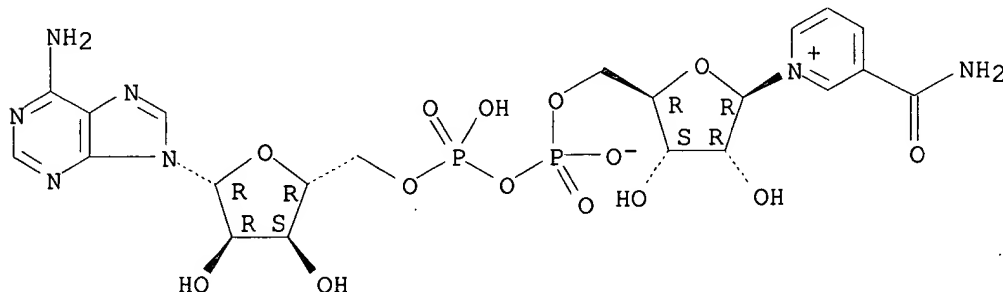
L6

NADT

RN 53-84-9 REGISTRY
 CN Adenosine 5'-(trihydrogen diphosphate), P'.fwdarw.5'-ester with
 3-(aminocarbonyl)-1-.beta.-D-ribofuranosylpyridinium, inner salt (9CI)
 (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN Adenosine 5'-(trihydrogen diphosphate), P'.fwdarw.5'-ester with
 3-(aminocarbonyl)-1-.beta.-D-ribofuranosylpyridinium hydroxide, inner salt
 CN Pyridinium, 3-carbamoyl-1-.beta.-D-ribofuranosyl-, hydroxide,
 5'.fwdarw.5'-ester with adenosine 5'-(trihydrogen pyrophosphate), inner
 salt (8CI)
 OTHER NAMES:
 CN .beta.-Diphosphopyridine nucleotide
 CN .beta.-NAD
 CN .beta.-NAD+
 CN .beta.-Nicotinamide adenine dinucleotide
 CN Adenine-nicotinamide dinucleotide
 CN Codehydrase I
 CN Codehydrogenase I
 CN Coenzyme I
 CN Cozymase I
 CN Diphosphopyridine nucleotide
 CN DPN
 CN Enzopride
 CN ~~NAD~~
 CN NAD+
 CN **Nadide**
 CN Nicotinamide-adenine dinucleotide
 CN Oxidized diphosphopyridine nucleotide
 FS STEREOSEARCH
 DR 30429-30-2, 159929-29-0
 MF C21 H27 N7 O14 P2
 CI COM
 LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS,
 BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN,
 CHEMCATS, CHEMLIST, CIN, CSCHEM, DDFU, DIOGENES, DRUGU, EMBASE, IFICDB,
 IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC,
 PIRA, PROMT, RTECS*, TOXCENTER, USAN, USPAT2, USPATFULL
 (*File contains numerically searchable property data)
 Other Sources: DSL**, EINECS**, TSCA**, WHO
 (**Enter CHEMLIST File for up-to-date regulatory information)

*Because of this, WPIDS & medline
 will not allow search with this term.*

Absolute stereochemistry.



10846 REFERENCES IN FILE CA (1962 TO DATE)
 443 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 10852 REFERENCES IN FILE CAPLUS (1962 TO DATE)
 129 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L3
Some of the
Transition metal compounds

L3 ANSWER 1 OF 9 REGISTRY COPYRIGHT 2002 ACS
RN 51312-42-6 REGISTRY
CN Sodium tungsten hydroxide oxide phosphate (9CI) (CA INDEX NAME)

OTHER NAMES:

CN **Sodium phosphotungstate**
CN Sodium tungstophosphate
CN Tungstophosphoric acid, sodium salt
MF H O . Na . O4 P . O . W
CI TIS
LC STN Files: AGRICOLA, BIOSIS, CA, CAPLUS, CASREACT, CEN, CHEMCATS,
CHEMLIST, CSCHEM, EMBASE, IFICDB, IFIPAT, IFIUDB, MRCK*, NIOSHTIC,
RTECS*, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**, NDSL**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

Component	Ratio	Component Registry Number
O	x	17778-80-2
HO	x	14280-30-9
O4P	x	14265-44-2
W	x	7440-33-7
Na	x	7440-23-5

92 REFERENCES IN FILE CA (1962 TO DATE)
3 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
92 REFERENCES IN FILE CAPLUS (1962 TO DATE)

L3 ANSWER 2 OF 9 REGISTRY COPYRIGHT 2002 ACS
RN 27774-13-6 REGISTRY
CN Vanadium, oxo[sulfato(2-)-.kappa.O]- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Vanadium, oxosulfato- (8CI)
CN Vanadium, oxo[sulfato(2-)-O]-
CN Vanadyl sulfate (VO(SO4)) (6CI)

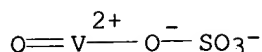
OTHER NAMES:

CN C.I. 77940
CN Oxo(sulfato)vanadium
CN Oxovanadium(IV) sulfate
CN Vanadium oxide sulfate (VO(SO4))
CN Vanadium oxosulfate
CN Vanadium oxysulfate (VOSO4)
CN Vanadium sulfate (VO(SO4))
CN Vanadyl monosulfate
CN **Vanadyl sulfate**
DR 12036-78-1, 13767-17-4, 13864-22-7, 1344-64-5, 102500-64-1, 102500-65-2,
102500-66-3, 102500-67-4, 102500-68-5, 102500-69-6, 102500-70-9,
102500-71-0, 102512-68-5, 102512-69-6, 102512-70-9, 102512-71-0,
102512-72-1, 3547-25-9, 410546-95-1

MF O5 S V

CI CCS, COM

LC STN Files: ADISNEWS, AQUIRE, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD,
CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CSCHEM, CSNB, DDFU, DETHERM*,
DRUGU, EMBASE, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*,
MSDS-OHS, NIOSHTIC, RTECS*, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



1098 REFERENCES IN FILE CA (1962 TO DATE)
 14 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 1099 REFERENCES IN FILE CAPLUS (1962 TO DATE)
 19 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

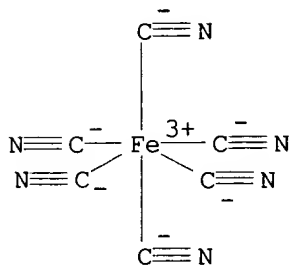
L3 ANSWER 3 OF 9 REGISTRY COPYRIGHT 2002 ACS
 RN 13746-66-2 REGISTRY
 CN Ferrate(3-), hexakis(cyano-.kappa.C)-, tripotassium, (OC-6-11)- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Ferrate(3-), hexacyano-, tripotassium (8CI)
 CN Ferrate(3-), hexakis(cyano-C)-, tripotassium, (OC-6-11)-

OTHER NAMES:

CN Iron potassium cyanide (FeK3(CN)6)
 CN Potassium cyanoferrate (K3Fe(CN)6)
 CN Potassium ferricyanate
 CN **Potassium ferricyanide**
 CN Potassium ferricyanide (K3Fe(CN)6)
 CN Potassium hexacyanoferrate(3-)
 CN Potassium hexacyanoferrate(III)
 CN Potassium iron cyanide (K3Fe(CN)6)
 CN Red prussiate
 CN Tripotassium ferric hexacyanide
 CN Tripotassium ferricyanide
 CN Tripotassium hexacyanoferrate
 CN Tripotassium hexacyanoferrate(3-)
 CN Tripotassium iron hexacyanide
 DR 409-16-5, 2002-18-8
 MF C6 Fe N6 . 3 K
 CI CCS, COM
 LC STN Files: AGRICOLA, ANABSTR, AQUIRE, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DRUGU, EMBASE, GMELIN*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NIOSHTIC, PDLCOM*, PIRA, PROMT, RTECS*, TOXCENTER, TULSA, USPAT2, USPATFULL, VTB
 (*File contains numerically searchable property data)
 Other Sources: DSL**, EINECS**, TSCA**
 (**Enter CHEMLIST File for up-to-date regulatory information)
 CRN (13408-62-3)

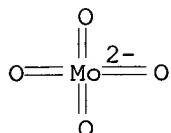


3 K⁺

4645 REFERENCES IN FILE CA (1962 TO DATE)
 51 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

4653 REFERENCES IN FILE CAPLUS (1962 TO DATE)
3 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L3 ANSWER 4 OF 9 REGISTRY COPYRIGHT 2002 ACS
RN 13106-76-8 REGISTRY
CN Molybdate (MoO4²⁻), diammonium, (T-4)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Molybdic acid (H2MoO4), diammonium salt (8CI)
OTHER NAMES:
CN **Ammonium molybdate**
CN Ammonium molybdate [(NH4)2MoO4]
CN Diammonium molybdate
CN Diammonium molybdate ((NH4)2MoO4)
CN Diammonium tetraoxomolybdate(2-)
CN Molybdic acid diammonium salt
DR 140899-16-7
MF H4 N . 1/2 Mo O4
CI CCS, COM
LC STN Files: AGRICOLA, ANABSTR, AQUIRE, BIOBUSINESS, BIOSIS, BIOTECHNO,
CA, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX,
CHEMLIST, CIN, CSCHEM, CSNB, DETHERM*, EMBASE, HSDB*, IFICDB, IFIPAT,
IFIUDB, MSDS-OHS, NIOSHTIC, PDLCOM*, PIRA, PROMT, RTECS*, TOXCENTER,
TULSA, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)
CRN (14259-85-9)



2 NH₄⁺

857 REFERENCES IN FILE CA (1962 TO DATE)
17 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
858 REFERENCES IN FILE CAPLUS (1962 TO DATE)
12 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L3 ANSWER 5 OF 9 REGISTRY COPYRIGHT 2002 ACS
RN 12680-49-8 REGISTRY
CN Molybdenum sodium oxide (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Molybdic acid, sodium salt
OTHER NAMES:
CN **Sodium molybdate**
CN Sodium molybdenum oxide
CN Sodium orthomolybdate
DR 58968-03-9, 64093-84-1, 37297-00-0, 153456-57-6
MF Mo . Na . O
CI COM, TIS
LC STN Files: AGRICOLA, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAPLUS,
CASREACT, CHEMCATS, CHEMLIST, CIN, DIOGENES, EMBASE, IFICDB, IFIPAT,
IFIUDB, NIOSHTIC, PIRA, PROMT, TOXCENTER, TULSA, USPATFULL

Other Sources: DSL**

(**Enter CHEMLIST File for up-to-date regulatory information)

Component	Ratio	Component Registry Number
O	x	17778-80-2
Na	x	7440-23-5
Mo	x	7439-98-7

555 REFERENCES IN FILE CA (1962 TO DATE)

24 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

555 REFERENCES IN FILE CAPLUS (1962 TO DATE)

L3 ANSWER 6 OF 9 REGISTRY COPYRIGHT 2002 ACS

RN 12027-67-7 REGISTRY

CN Molybdate (Mo7O246-), hexaammonium (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Ammonium molybdate(VI) ((NH4)6Mo7O24) (6CI)

CN Molybdic acid (H6Mo7O24), hexaammonium salt (8CI)

OTHER NAMES:

CN Ammonium heptamolybdate

CN Ammonium heptamolybdate ((NH4)6Mo7O24)

CN **Ammonium molybdate**

CN Ammonium molybdate ((NH4)6(Mo7O24))

CN Ammonium molybdate ((NH4)6Mo7O24)

CN Ammonium paramolybdate

CN Ammonium paramolybdate ((NH4)6Mo7O24)

CN Hexaammonium heptamolybdate

CN Hexaammonium tetracosaoxoheptamolybdate

CN Hexaammonium tetracosaoxoheptamolybdate(6-)

CN PM 20

DR 12501-45-0

MF H4 N . 1/6 Mo7 O24

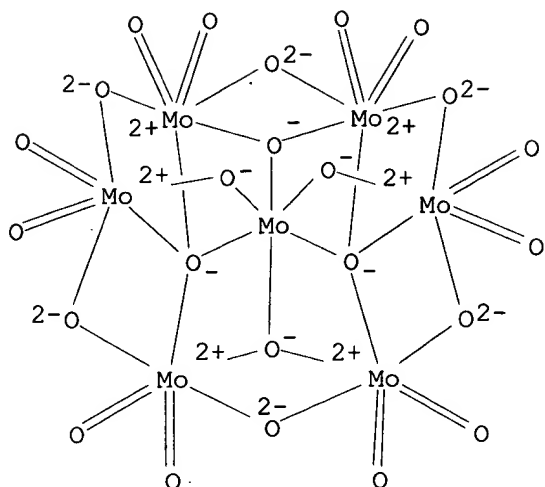
CI CCS, COM

LC STN Files: AGRICOLA, ANABSTR, AQUIRE, BIOBUSINESS, BIOSIS, BIOTECHNO,
CA, CAOLD, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMLIST, CIN, CSCHM,
EMBASE, HSDB*, IFICDB, IFIPAT, IFIUDB, MEDLINE, MRCK*, MSDS-OHS,
NIOSHTIC, PIRA, PROMT, RTECS*, TOXCENTER, TULSA, USPAT2, USPATFULL, VTB
(*File contains numerically searchable property data)

Other Sources: DSL**, EINECS**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)

CRN (12274-10-1)



● 6 NH₄⁺

1951 REFERENCES IN FILE CA (1962 TO DATE)
 55 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 1952 REFERENCES IN FILE CAPLUS (1962 TO DATE)
 20 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

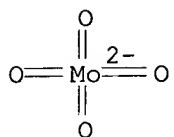
L3 ANSWER 7 OF 9 REGISTRY COPYRIGHT 2002 ACS
 RN 11098-84-3 REGISTRY
 CN Ammonium molybdenum oxide (9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN Molybdic acid, ammonium salt
 OTHER NAMES:
 CN **Ammonium molybdate**
 DR 12673-54-0, 11119-83-8, 11128-97-5
 MF Unspecified
 CI COM, MAN
 LC STN Files: AGRICOLA, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMLIST, CIN, CSCHEM, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPAT, ENCOMPAT2, IFICDB, IFIPAT, IFIUDB, MEDLINE, MSDS-OHS, NIOSHTIC, PDLCOM*, PIRA, PROMT, RTECS*, TOXCENTER, TULSA, USPAT2, USPATFULL, VTB
 (*File contains numerically searchable property data)
 Other Sources: EINECS**, NDSL**, TSCA**
 (**Enter CHEMLIST File for up-to-date regulatory information)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

1569 REFERENCES IN FILE CA (1962 TO DATE)
 52 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 1573 REFERENCES IN FILE CAPLUS (1962 TO DATE)

L3 ANSWER 8 OF 9 REGISTRY COPYRIGHT 2002 ACS
 RN 7631-95-0 REGISTRY
 CN Molybdate (MoO₄²⁻), disodium, (T-4)- (9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN Molybdic acid (H₂MoO₄), disodium salt (8CI)
 OTHER NAMES:
 CN Disodium molybdate
 CN Disodium molybdate (Na₂MoO₄)
 CN Disodium tetraoxomolybdate
 CN Disodium tetraoxomolybdate(2-)

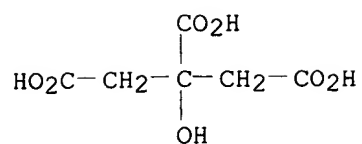
CN Molybdenum sodium oxide (MoNa2O4)
 CN Molybdenum sodium oxide (Na2MoO4)
 CN **Sodium molybdate**
 CN Sodium molybdate (Na2MoO4)
 CN Sodium molybdenate (Na2MoO4)
 CN Sodium molybdenum oxide (Na2MoO4)
 CN Sodium tetraoxomolybdate(2-)
 DR 14666-91-2, 106463-33-6
 MF Mo O4 . 2 Na
 CI CCS, COM
 LC STN Files: AGRICOLA, AQUIRE, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA,
 CANCERLIT, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CIN, CSCHEM,
 DETHERM*, DIOGENES, EMBASE, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*,
 MSDS-OHS, NIOSHTIC, PIRA, PROMT, RTECS*, TOXCENTER, TULSA, USPAT2,
 USPATFULL
 (*File contains numerically searchable property data)
 Other Sources: DSL**, EINECS**, TSCA**
 (**Enter CHEMLIST File for up-to-date regulatory information)
 CRN (14259-85-9)



● 2 Na⁺

2910 REFERENCES IN FILE CA (1962 TO DATE)
 67 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 2915 REFERENCES IN FILE CAPLUS (1962 TO DATE)
 14 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L3 ANSWER 9 OF 9 REGISTRY COPYRIGHT 2002 ACS
 RN 7050-19-3 REGISTRY
 CN 1,2,3-Propanetricarboxylic acid, 2-hydroxy-, ammonium iron salt (9CI) (CA
 INDEX NAME)
 OTHER CA INDEX NAMES:
 CN **Ammonium iron citrate (6CI, 7CI)**
 CN Citric acid, ammonium iron salt (8CI)
 OTHER NAMES:
 CN Ammoniacal iron citrate
 CN Iron ammonium citrate
 DR 10168-99-7
 MF C6 H8 O7 . x Fe . x H3 N
 LC STN Files: BEILSTEIN*, BIOSIS, CA, CAOLD, CAPLUS, CHEMLIST, GMELIN*,
 MEDLINE, TOXCENTER, USPATFULL
 (*File contains numerically searchable property data)
 Other Sources: EINECS**, NDSL**, TSCA**
 (**Enter CHEMLIST File for up-to-date regulatory information)
 CRN (77-92-9)



●x Fe(x)

●x NH₃

93 REFERENCES IN FILE CA (1962 TO DATE)
 2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 93 REFERENCES IN FILE CAPLUS (1962 TO DATE)
 5 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

NADH + mto

AN 2002-205946 [26] WPIDS

DNC C2002-063093

TI New composition useful for improving body compositional property of e.g. human, comprises a mixture of **dietary supplement** and a fatty acid source containing conjugated linoleic acid and/or modified tall oil.

DC B05 C03 D13

IN GOODBAND, R D; KOO, S I; NELSEN, J L; O'QUINN, P; OWEN, K Q; TOKACH, M D

PA (UNIV) UNIV KANSAS STATE RES FOUND

CYC 94

PI WO 2002002106 A1 20020110 (200226)* EN 34p

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ
NL OA PT SD SE SL SZ TR TZ UG ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK
DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ
LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD
SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

AU 2001071831 A 20020114 (200237)

ADT WO 2002002106 A1 WO 2001-US21242 20010629; AU 2001071831 A AU 2001-71831 20010629

FDT AU 2001071831 A Based on WO 200202106

PRAI US 2000-608817 20000630

TI New composition useful for improving body compositional property of e.g. human, comprises a mixture of **dietary supplement** and a fatty acid source containing conjugated linoleic acid and/or modified tall oil.

AB WO 200202106 A UPAB: 20020424

NOVELTY - A composition (I) comprises a mixture of **dietary supplement** (a) and a fatty acid source (b) containing conjugated linoleic acid (CLA) and/or modified tall oil (MTO).

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for a combination of a **food** or beverage for a human or animal and a composition (I) (at least 0.01 wt.%) based on the total weight of the **food** or beverage taken as 100 wt.%.

ACTIVITY - Anorectic.

MECHANISM OF ACTION - None given.

USE - The composition is used for improving a body compositional property of a human or animal; as a feed for post-menopausal women and animals selected from rats, swine, cattle, poultry, horses, dogs, cats or fish (all claimed). The composition helps to reduce the body weight of animals/humans.

ADVANTAGE - The composition is safe and effective in treatments which reduce body weight gain by at least about 1%, body fat by at least about 1%, increases the total body lean mass by at least about 0.5% and an ash content of at least about 1% in human or animal. The composition reduces the risk of osteoporosis and adiposity. The modified tall oil (MTO) alters the metabolism of alpha tocopherol in a manner that concentrates it in the adipose tissues. MTO reduces serum cholesterol and phospholipid levels and beneficially alters the body and serum and tissue compositions in ovariectomized rats, commonly used as a model for post-menopausal women. Dwg.0/1

TECH UPTX: 20020424

TECHNOLOGY FOCUS - **FOOD** - Preferred Components: (a) is an agent for altering the metabolism of a human or animal and a component selected from fat, water, mineral and/or protein. (a) is selected from sources of carnitine, **chromium**, creatine, monohydrate, androstenedione, anabolic agent, co-enzyme Q10, ~~TCA intermediate~~, lipoic acid, betaine, beta-agonist, somatostatin, heavy metal, botanical herb, adenosine triphosphate (ATP), nicotinamide adenine dinucleotide (NADH) and/or hydroxymethyl-butyrate.

Preferred Result: The composition helps to reduce the weight of animals/humans by at least 1%. The composition alters the metabolism of fat, water, minerals and/or protein.

Preferred Combination: The combination comprises a **food** presenting an outer surface with (I) coated on its surface of the **food**. (I) is mixed with **food** or beverage.

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Composition: The composition comprises (wt.%): MTO (0.01 -99), (a) (25 parts per billion (ppb) - 99 wt.%), and CLA (0.01-99).

All Circled L#s
were reviewed online.

Files
Caplus
WPIDS
medicine

L1 138603 SEA NAD OR NAD# OR NADIDE OR ADENINE NICOTINAMIDE DINUCLEOTIDE
OR DIPHOSPHOPYRIDINE NUCLEOTIDE
L2 142406 SEA L1 OR ADENINE NICOTINAMIDE DINUCLEOTIDE OR CODEHYDRASE I
OR CODEHYDROGENASE I OR ENZOPRIDE OR NICOTINAMIDE ADENINE
DINUCLEOTIDE
L3 34927 SEA (ALCOHOL? OR ETHANOL) (10A) (REMOV? OR OXIDIZ? OR CLEAR?
OR METABOLIZ? OR DETOXIF? OR EXCESSIVE OR ABUS?)
L4 140 SEA L2 (50A) L3
L5 117 DUP REM L4 (23 DUPLICATES REMOVED)
L6 1621696 SEA MOLYB? OR TUNGST? OR PHOSPHOTUNGST? OR MANGANES? OR
ZIRCON? OR NIOBIUM OR TANTALUM OR COBALT OR CHROMIUM
L7 0 SEA L5 (75A) L6

L1 138603 SEA NAD OR NAD# OR NADIDE OR ADENINE NICOTINAMIDE DINUCLEOTIDE
OR DIPHOSPHOPYRIDINE NUCLEOTIDE
L2 142406 SEA L1 OR ADENINE NICOTINAMIDE DINUCLEOTIDE OR CODEHYDRASE I
OR CODEHYDROGENASE I OR ENZOPRIDE OR NICOTINAMIDE ADENINE
DINUCLEOTIDE
L3 34927 SEA (ALCOHOL? OR ETHANOL) (10A) (REMOV? OR OXIDIZ? OR CLEAR?
OR METABOLIZ? OR DETOXIF? OR EXCESSIVE OR ABUS?)
L4 140 SEA L2 (50A) L3
L5 117 DUP REM L4 (23 DUPLICATES REMOVED)
L6 1621696 SEA MOLYB? OR TUNGST? OR PHOSPHOTUNGST? OR MANGANES? OR
ZIRCON? OR NIOBIUM OR TANTALUM OR COBALT OR CHROMIUM
L8 1 SEA L5 (L) (L6 OR TRANSITION METAL?)

L8 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS
AN 2003:340047 CAPLUS
TI Highly stable amperometric biosensor for ethanol based on Meldola's blue
adsorbed on silica gel modified with niobium oxide
AU Santos, Antonio S.; Freire, Renato S.; Kubota, Lauro T.
CS Instituto de Quimica, Universidade Estadual de Campinas -UNICAMP, CP 6154,
SP, Campinas, CEP 13083-970, Brazil
SO Journal of Electroanalytical Chemistry (2003), 547(2), 135-142
CODEN: JECHES
PB Elsevier Science B.V.
DT Journal
LA English
AB A reagentless amperometric biosensor sensitive to ethanol was developed.
This sensor comprises a carbon paste electrode modified with alc.
dehydrogenase (ADH), NAD (NAD+) cofactor and Meldola's blue (MB) adsorbed
on silica gel coated with **niobium** oxide. The amperometric
response was based on the electrocatalytic properties of MB to
oxidize NADH, which was generated in the enzymic
reaction of **ethanol** with **NAD+** under catalysis of ADH.
The dependence on the biosensor response was investigated in terms of pH,
supporting electrolyte, ionic strength, ADH and NAD+ amts. and working
potential. The biosensor showed an excellent operational stability (95%
of the activity was maintained after 300 detns.) and storage stability
(allowing measurements for over than 3 mo, when stored in a refrigerator).
The proposed biosensor also presented good sensitivity allowing ethanol
quantification at levels down to 8.0.times.10⁻⁶.mol l⁻¹. Moreover, the
biosensor showed a wide linear response range (from 0.1 to 10 mmol l⁻¹ for
ethanol). These favorable characteristics allowed its application for
direct measurements of ethanol in a great variety of alc. beverages,
including beer, wine and spirits. The precision and recovery data shown
by the proposed biosensor may give reliable results for real complex
matrixes.

L1 138603 SEA NAD OR NAD# OR NADIDE OR ADENINE NICOTINAMIDE DINUCLEOTIDE
OR DIPHOSPHOPYRIDINE NUCLEOTIDE
L6 1621696 SEA MOLYB? OR TUNGST? OR PHOSPHOTUNGST? OR MANGANES? OR
ZIRCON? OR NIOBIUM OR TANTALUM OR COBALT OR CHROMIUM
L9 290 SEA L1 (50A) (DETOXIF? OR INTOXIC? OR HANGOVER#)
L10 0 SEA L9 (L) (L6 OR TRANSITION METAL#)

L1 138603 SEA NAD OR NAD# OR NADIDE OR ADENINE NICOTINAMIDE DINUCLEOTIDE
OR DIPHOSPHOPYRIDINE NUCLEOTIDE
L2 142406 SEA L1 OR ADENINE NICOTINAMIDE DINUCLEOTIDE OR CODEHYDRASE I
OR CODEHYDROGENASE I OR ENZOPRIDE OR NICOTINAMIDE ADENINE
DINUCLEOTIDE
L3 34927 SEA (ALCOHOL? OR ETHANOL) (10A) (REMOV? OR OXIDIZ? OR CLEAR?
OR METABOLIZ? OR DETOXIF? OR EXCESSIVE OR ABUS?)
L4 140 SEA L2 (50A) L3
L5 117 DUP REM L4 (23 DUPLICATES REMOVED)
L9 290 SEA L1 (50A) (DETOXIF? OR INTOXIC? OR HANGOVER#)
L11 402 SEA L9 OR L5
L12 316 DUP REM L11 (86 DUPLICATES REMOVED)
L13 314 SEA L12 AND (ALCOHOL OR ETHANOL OR LIQUOR OR INTOXIC? OR DRUNK
OR DETOX? OR HANGVOER#)

L1 138603 SEA NAD OR NAD# OR NADIDE OR ADENINE NICOTINAMIDE DINUCLEOTIDE
OR DIPHOSPHOPYRIDINE NUCLEOTIDE
L6 1621696 SEA MOLYB? OR TUNGST? OR PHOSPHOTUNGST? OR MANGANES? OR
ZIRCON? OR NIOBIUM OR TANTALUM OR COBALT OR CHROMIUM
L14 2004 SEA L1 (50A) (L6 OR IRON OR FERRIC OR FERROUS OR COPPER OR
CUPRIC OR CUPROUS OR TINATUM OR NICKEL OR PALLADIUM OR
TRANSITION METAL#)
L15 319 SEA L14 AND (THERAP? OR DRUG# OR PHARMACEUTICAL? OR NUTRITION?
OR FOOD# OR SUPPLEMENT? OR REGIMEN OR ADMINISTER? OR INJECT?
OR PILL# OR CAPSUL? OR DIETARY)
L16 276 DUP REM L15 (43 DUPLICATES REMOVED)
L17 29 SEA (L14 (100A) (THERAP? OR DRUG# OR PHARMACEUTICAL? OR
NUTRITION? OR FOOD# OR SUPPLEMENT? OR REGIMEN OR ADMINISTER?
OR INJECT? OR PILL# OR CAPSUL? OR DIETARY)) AND L16

NADH

AN 2001-536391 [59] WPIDS

DNC C2001-159651

TI Composition comprising ubiquinol and a reducing agent as a stabilizer, useful for the treatment or prevention of e.g. stroke, blood pressure, mitochondrial cytopathy.

DC A96 B05

IN CHOPRA, R K

PA (CHOP-I) CHOPRA R K

CYC 95

PI WO 2001052822 A1 20010726 (200159)* EN 50p

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ
NL OA PT SD SE SL SZ TR TZ UG ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM
DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC
LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE
SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

AU 2001029679 A 20010731 (200171)

EP 1251834 A1 20021030 (200279) EN

R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
RO SE SI TR

ADT WO 2001052822 A1 WO 2001-US1997 20010118; AU 2001029679 A AU 2001-29679
20010118; EP 1251834 A1 EP 2001-942547 20010118, WO 2001-US1997 20010118

FDT AU 2001029679 A Based on WO 200152822; EP 1251834 A1 Based on WO 200152822

PRAI US 2000-637559 20000811; US 2000-488332 20000120

AB WO 200152822 A UPAB: 20011012

NOVELTY - Composition comprises ubiquinol (I) and a reducing agent to reduce or eliminate the oxidation of the ubiquinol to ubiquinone. The composition further comprises a surfactant or vegetable oil and/or mixtures and optionally comprises a solvent to solubilize the ubiquinol and the reducing agent.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for:

(1) the composition in oral dosage form being formulated into a gelatin **capsule** or tablet;

(2) a method of preparing a composition in **pharmaceutical** dosage form;

(3) a method for increasing bioavailability of ubiquinone from an orally or topically **administered** composition; and

(4) a method of preparing a storage stable composition in oral dosage form comprising (I) comprises preparing a mixture of (I) in combination with a reducing agent effective to reduce or prevent the oxidation (I) to ubiquinone during the storage of the composition and a solubilizer, and adding the mixture to a hard or soft gelatin **capsule** to additives, carriers or excipients.

ACTIVITY - Cardiant; Hypotensive; Cytoprotectant; Neuroprotective; Cerebroprotective; Ophthalmological; Antilipemic; Immunostimulant; Vasotropic; Nootropic; Antiparkinsonian.

MECHANISM OF ACTION - Antioxidant; Coenzyme.

USE - (I) is used for the manufacture of a medicament for the treatment or prevention of congestive heart failure, high blood pressure, mitochondrial cytopathy (e.g. mitochondrial encephalopathy, Kearns-Sayre disease, Alpers disease, mitochondrial encephalopathy with lactic acidosis and stroke-like episodes, and Levers hereditary optical neuropathy), anoxia, lactic acidosis, stroke like symptoms, neurodegenerative diseases, periodontal disease, elevated cholesterol or

triglycerides, weakened immune system, heart attack (all claimed), ischemia/reperfusion injury, Alzheimer's disease, dementia and Parkinson's disease.

ADVANTAGE - The composition is storage stable and further comprises a reducing agent to reduce or prevent the oxidation of ubiquinol to ubiquinone (claimed). Improves the bioavailability of Coenzyme Q preparations by providing stabilized formulations.

Dwg.0/0

TECH

UPTX: 20011012

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Composition: The reducing agent is selected from glutathione, L-cysteine, N-acetyl cysteine, reduced alpha-lipoic acid, tocotrienols, tocopherols, vitamin E, vitamin E esters, vitamin C, vitamin C esters, vitamin A (retinol, retinoic acid), vitamin A esters, alpha carotene, beta carotene, lutein, zeaxanthin, astaxanthin, lycopene, flavonoids, L-carnitine, acetyl L-carnitine, propionyl L-carnitine, magnesium, zinc, selenium, ~~manganese~~ riboflavin, niacinamide, curcuminoids, proanthocyanidins, ~~NADH~~ NADPH, resveratrol, bilberry extract, milk thistle extract, retinol, retinoic acid, retinoic acid ester retinal and/or omega-3-fatty acids. The surfactant is selected from a complex ester, or ester-ether surfactants of formula (i) prepared from hexahydric alcohols, alkylene oxides and fatty acids, polysorbate surfactants of formula (ii) and/or mixtures. The vegetable oil comprises medium chain triglycerides selected from soybean oil, sunflower oil, safflower oil, cottonseed oil, castor oil, rapeseed oil, coconut oil and or palm oil. The composition further comprises alpha lipoic acid or a HMG CoA reductase inhibitor **drug** selected from lovastatin, pravastatin, fluvastatin, simvastatin, mevastatin, fluindostatin. The solvent is ethanol or a polyhydric alcohol selected fr

AN 1989:44930 CAPLUS
 DN 110:44930
 TI Protein compositions substantially free from infectious agents
 IN Lembach, Kenneth J.
 PA Miles Laboratories, Inc., USA
 SO U.S., 12 pp. Cont.-in-part of U.S. 4,534,972.
 CODEN: USXXAM
 DT Patent
 LA English
 FAN.CNT 2

Get this

102 for

NADH +

Transition
metal

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4720385	A	19880119	US 1985-736197	19850520
	US 4534972	A	19850813	US 1983-480056	19830329
	AU 8425605	A1	19841004	AU 1984-25605	19840314
	AU 557006	B2	19861127		
	ES 530805	A1	19850616	ES 1984-530805	19840321
	JP 59193830	A2	19841102	JP 1984-58522	19840328
	JP 05037126	B4	19930602		
	CA 1223203	A1	19870623	CA 1984-450684	19840328
PRAI	US 1983-480056		19830329		
	CA 1986-450684		19860609		

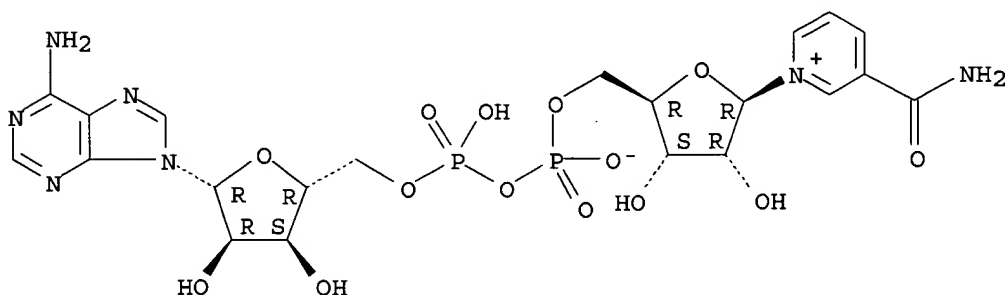
AB Compns. contg. **therapeutically** or immunol. active proteins such as blood products and vaccines are freed from infectious agents (e.g. viable viruses and bacteria) without substantial loss of **therapeutic** or immunol. activity by mixing the protein compn. with a complex formed from **transition metal** ions (e.g. Cu ions), a ligand (e.g. phenanthroline), and a reducing agent (e.g. a thiol, ascorbic acid or its salts, **NADH**, NADPH, or their mixts.). Factor VIII conc. was inoculated with high-titer vesicular stomatitis virus and treated with copper-phenanthroline complex (Cu, 0.01 mM; 1,10-phenanthroline, 0.5 mM), cysteine 2 mM, and ascorbic acid 1 mM; after 30 min incubation, the residual virus titer was <102. There was no significant loss of Factor VIII activity.

NOTE → NADH ≠ NAD

AN 1992:403158 CAPLUS
DN 117:3158
TI Chemically induced modification of cofactor specificity of
glucose-6-phosphate dehydrogenase
AU Crans, Debbie C.; Simone, Carmen M.; Blanchard, John S.
CS Dep. Chem., Colorado State Univ., Fort Collins, CO, 80523, USA
SO Journal of the American Chemical Society (1992), 114(12), 4926-8
CODEN: JACSAT; ISSN: 0002-7863
DT Journal
LA English
AB **Vanadate** ester formation was used to change the cofactor
specificity of glucose 6-phosphate dehydrogenase from NADP to **NAD**
(+ **vanadate**). The 2'-NADP analog, 2'-NADV, formed by mixing
NAD and **vanadate** in aq. solns., was a good cofactor
analog for glucose 6-phosphate dehydrogenase. The K_m for 2'-NADV (0.003
mM) was less than the K_m for 2'-NADP (0.025 mM); however, the V_{max} for
2'-NADV was less than the V_{max} for 2'-NADP by a factor of 5000. The
2'-NADP **vanadate** analog should be a convenient probe in both
biol. and spectroscopic studies of cofactor sites in 2'-NADP dependent
enzymes. The activity of 2'-NADV as a cofactor demonstrates that simple
chem. reactions can induce changes in cofactor specificity of enzymes and
provide an attractive alternative to site-directed mutagenesis.

RN 53-84-9 REGISTRY
 CN Adenosine 5'-(trihydrogen diphosphate), P'.fwdarw.5'-ester with
 3-(aminocarbonyl)-1-.beta.-D-ribofuranosylpyridinium, inner salt (9CI)
 (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN Adenosine 5'-(trihydrogen diphosphate), P'.fwdarw.5'-ester with
 3-(aminocarbonyl)-1-.beta.-D-ribofuranosylpyridinium hydroxide, inner salt
 CN Pyridinium, 3-carbamoyl-1-.beta.-D-ribofuranosyl-, hydroxide,
 5'.fwdarw.5'-ester with adenosine 5'-(trihydrogen pyrophosphate), inner
 salt (8CI)
 OTHER NAMES:
 CN .beta.-Diphosphopyridine nucleotide
 CN .beta.-NAD
 CN .beta.-NAD+
 CN .beta.-Nicotinamide adenine dinucleotide
 CN Adenine-nicotinamide dinucleotide
 CN Codehydrase I
 CN Codehydrogenase I
 CN Coenzyme I
 CN Cozymase I
 CN Diphosphopyridine nucleotide
 CN DPN
 CN Enzopride
 CN NAD
 CN NAD+
 CN Nadide
 CN Nicotinamide-adenine dinucleotide
 CN Oxidized diphosphopyridine nucleotide
 FS STEREOSEARCH
 DR 30429-30-2, 159929-29-0
 MF C21 H27 N7 O14 P2
 CI COM
 LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS,
 BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN,
 CHEMCATS, CHEMLIST, CIN, CSCHM, DDFU, DIOGENES, DRUGU, EMBASE, IFICDB,
 IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC,
 PIRA, PROMT, RTECS*, TOXCENTER, USAN, USPAT2, USPATFULL
 (*File contains numerically searchable property data)
 Other Sources: DSL**, EINECS**, TSCA**, WHO
 (**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.



RN 62640-02-2 REGISTRY

CN Adenosine 5'-(trihydrogen diphosphate), cyclic 2',3'-(hydrogen phosphate), P'.fwdarw.5'-ester with 3-(aminocarbonyl)-1-.beta.-D-ribofuranosylpyridinium inner salt (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Furo[3,4-d]-1,3,2-dioxaphosphole, adenosine 5'-(trihydrogen diphosphate) deriv.

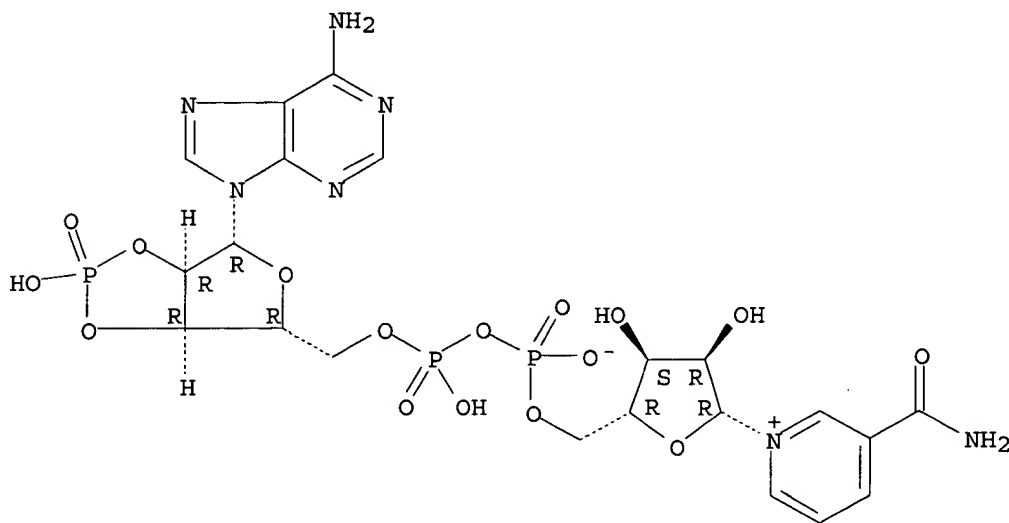
FS STEREOSEARCH

MF C21 H26 N7 O16 P3

CI COM

LC STN Files: CA, CAPLUS, CASREACT, MEDLINE, TOXCENTER

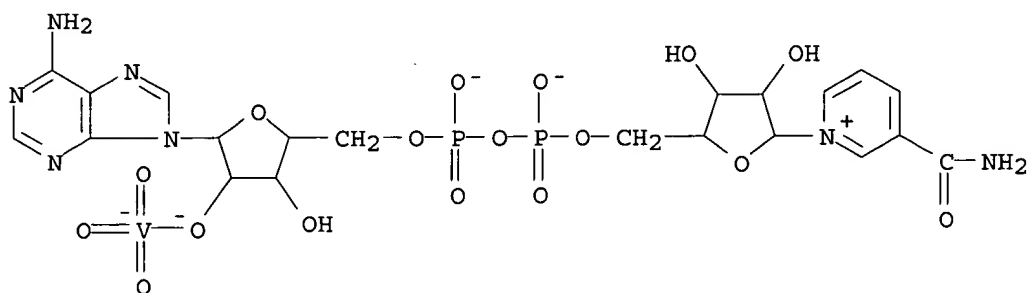
Absolute stereochemistry.



18 REFERENCES IN FILE CA (1962 TO DATE)

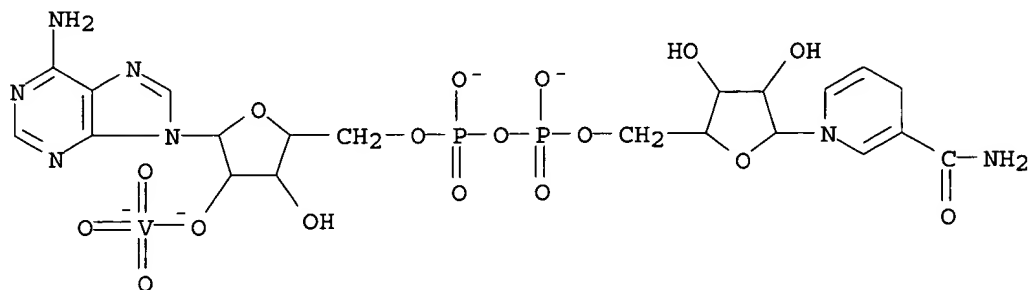
18 REFERENCES IN FILE CAPLUS (1962 TO DATE)

RN 141666-93-5 REGISTRY
 CN Vanadate(3-), [adenosine 5'-(diphosphato) P'.fwdarw.5'-ester with
 3-(aminocarbonyl)-1-.beta.-D-ribofuranosylpyridiniumato(3-)]trioxo-,
 (T-4)- (9CI) (CA INDEX NAME)
 MF C21 H25 N7 O17 P2 V
 CI CCS
 SR CA
 LC STN Files: CA, CAPLUS, TOXCENTER



2 REFERENCES IN FILE CA (1962 TO DATE)
 2 REFERENCES IN FILE CAPLUS (1962 TO DATE)

RN 141684-02-8 REGISTRY
 CN Vanadate(4-), [adenosine 5'-(trihydrogen diphosphate) P'.fwdarw.5'-ester
 with 1,4-dihydro-1-.beta.-D-ribofuranosyl-3-pyridinecarboxamidato(3-)-
 O2']trioxo-, (T-4)- (9CI) (CA INDEX NAME)
 MF C21 H26 N7 O17 P2 V
 CI CCS
 SR CA
 LC STN Files: CA, CAPLUS, TOXCENTER



1 REFERENCES IN FILE CA (1962 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

AN 1993:186573 CAPLUS
DN 118:186573
TI NADV: a new cofactor for alcohol dehydrogenase from *Thermoanaerobium*
brockii
AU Crans, Debbie C.; Marshman, Robert W.; Nielsen, Rikke; Felty, Irena
CS Dep. Chem., Colorado State Univ., Fort Collins, CO, 80523, USA
SO Journal of Organic Chemistry (1993), 58(8), 2244-52
CODEN: JOCEAH; ISSN: 0022-3263
DT Journal
LA English
AB Cofactor recognition and conversion are important when conducting
reactions using alc. dehydrogenases in enzyme-catalyzed synthesis. Here
alc. dehydrogenase from *T. brockii* is reported to accept a soln. of
NAD and **vanadate** (presumably 2'-NADV) as a cofactor with
a better k_{cat}/K_m ratio than NADP. A combination of 51V NMR spectroscopy
and enzyme kinetics were used to det. the Michaelis Menten parameters for
this cofactor. Comparisons with previous studies suggest that alc.
dehydrogenases of *T. brockii* may be prone to cofactor substitution.

AN 1993:186573 CAPLUS
DN 118:186573
TI NADV: a new cofactor for alcohol dehydrogenase from *Thermoanaerobium*
brockii
AU Crans, Debbie C.; Marshman, Robert W.; Nielsen, Rikke; Felty, Irena
CS Dep. Chem., Colorado State Univ., Fort Collins, CO, 80523, USA
SO Journal of Organic Chemistry (1993), 58(8), 2244-52
CODEN: JOCEAH; ISSN: 0022-3263
DT Journal
LA English
AB Cofactor recognition and conversion are important when conducting
reactions using alc. dehydrogenases in enzyme-catalyzed synthesis. Here
alc. dehydrogenase from *T. brockii* is reported to accept a soln. of
NAD and **vanadate** (presumably 2'-NADV) as a cofactor with
a better k_{cat}/K_m ratio than NADP. A combination of 51V NMR spectroscopy
and enzyme kinetics were used to det. the Michaelis Menten parameters for
this cofactor. Comparisons with previous studies suggest that alc.
dehydrogenases of *T. brockii* may be prone to cofactor substitution.